

Stein et al.

S/N: 10/605,546

REMARKS

Claims 1-23 are pending in the present application. In the Office Action mailed March 22, 2005, the Examiner rejected claims 1-23 under the judicially created doctrine of obviousness-type double patenting. The Examiner next rejected claims 1-23 under 35 U.S.C. §102(b) as being anticipated by Prunier (FR 2, 536,320). Claims 1-23 were rejected under 35 U.S.C. §102(b) as being anticipated by Behnke et al. (USP 2,510,207).

Claims 19-22 were objected to because of certain informalities. Applicant has made the appropriate corrections.

The drawings were objected to as failing to comply with 37 CFR §1.84(p)(5). Amended drawings are enclosed incorporating the changes requested by the Examiner.

The disclosure was objected to because of certain informalities. Applicant has made the appropriate corrections.

The Examiner first rejected claims under 35 U.S.C. §102(b) based on the French reference Prunier. As acknowledged by the Examiner, only the Abstract of the French reference was relied upon as a complete English translation of the reference was unavailable. However, Applicant would like to remind the Examiner that rejections based on abstracts are generally considered improper. MPEP §706.02. As is widely recognized, abstracts are commonly misleading, inaccurate, and incomplete. As such, MPEP §706.02 is clear that abstracts should only be relied upon in very limited circumstances. Specifically, "[i]n limited circumstances, it may be appropriate for the examiner to make a rejection in a non-final Office action based in whole or in part on the abstract only without relying on the full text document." *Id.* In these limited circumstances, "the full text document and a translation (if not in English) may be supplied in the next Office action." *Id.* As such, Applicant hereby requests the Examiner provide an English translation of the full text of the French reference with any subsequent action relying upon the reference.

Notwithstanding the reliance on only the Abstract of the French reference, the Abstract fails to teach or suggest that which is claimed. The Abstract discloses water-cooled welding torches. However, Applicant has not claimed only a water-cooled torch. The present invention is directed to a method and system of dynamically controlling coolant flow to a fluid-cooled torch. The Abstract neither teaches nor suggests any method or system of controlling coolant flow dynamically or in controlled manner. Accordingly, it is believed that claims 1-23 are directed to subject matter neither taught nor suggested by the Abstract of the French reference.

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In addition to the rejection of claims 1-23 based on the Abstract of the French reference, the Examiner redundantly rejected claims 1-23 under 35 U.S.C. §102(b) based on Behnke et al. The reference indicated that it is desirable "to provide an automatic control for cutting off the flow of cooling water after the electrode has cooled below [an] oxidation temperature." Col. 1, lns. 24-27. Applicant agrees that such an object is desirable. However, contrary to the conclusion of the Examiner, the reference teaches a method and system to cool that is substantially different from that claimed.

Specifically, the reference teaches a timed control loop whereupon a length of time is predetermined and coolant allowed to flow until expiration of that length of time on the presumption that the torch will cool to a desired temperature during that length of time. That is, "When the welding arc is extinguished by removing the electrode from proximity to the workpiece, the relay 10 is energized to close its switch 18, energize the timer 14 and start its motor 28 running." Col. 3, lns. 55-59. In this regard, "At the expiration of the time delay period, the timer 14 opens its switch 27 which closes the argon valve 15 and the water valve 16." Col. 3, lns. 59-61. Accordingly, coolant flows until a timer expires. With this technique, coolant flow ceases regardless of the actual temperature of the welding torch or coolant. If the torch or coolant temperature is at or below the given temperature before expiration of the timer, coolant still flows. This continued flow unnecessarily expends energy and thus contributes to system inefficiency. Similarly, coolant flow ceases at the expiration of the timer even if actual torch or coolant temperature exceeds the desired temperature. That is, with the system of Behnke et al., there is a presumption that the set time of the timer is of sufficient length to provide for adequate cooling. However, it is well-understood that for different welding applications, different cooling times may be required and with the system of the reference, a "presumed" temperature may not match actual temperature.

In contrast, claims 1-23 call for a method and/or system whereby coolant flow is maintained after deactivation of a welding-type process until the temperature of the coolant and/or welding-type component exceeds a threshold. That is, claim 1 calls for, in part, a cooling system that is configured to automatically circulate coolant through at least the welding-type component upon activation of the welding-type component and maintain coolant circulation upon deactivation of the welding-type component if a measured coolant temperature exceeds a threshold. Claim 12 calls for, in part, a controller configured to regulate a cooling system such that upon activation of a welding torch coolant is automatically caused to at least flow through the welding torch and monitor a temperature of the coolant after deactivation of the welding torch,

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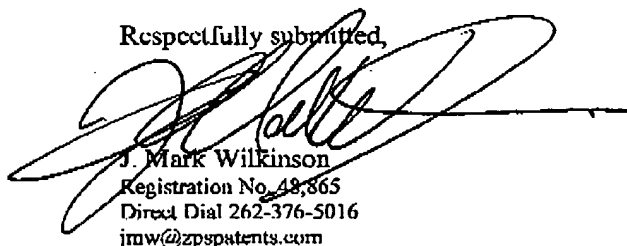
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and continue to circulate coolant until a temperature of the coolant falls below a predetermined value. Claim 18 calls for, in part, the step of maintaining coolant circulation through the welding-type component if the coolant temperature exceeds a threshold. And, claim 23 calls for, in part, means for maintaining coolant circulation until coolant temperature falls below a certain set point. Accordingly, it is believed that the timed-manner of the reference neither teaches nor suggests that which is called for in amended claims 1-23.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-23.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



J. Mark Wilkinson
Registration No. 48,865
Direct Dial 262-376-5016
jmw@zpspatents.com

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P.O. ADDRESS:
Ziolkowski Patent Solutions Group, SC
14135 North Cedarburg Road
Mequon, WI 53097-1416
262-376-5170